

THE GENUS *OLIGOTA* MANNERHEIM IN THE
CARIBBEAN REGION (COLEOPTERA: STAPHYLINIDAE)

J. H. FRANK

Sugar Manufacturers' Association (of Jamaica) Ltd.,
Research Department, Mandeville, Jamaica¹

ABSTRACT

Descriptions are given for 20 known species and 5 new species of the genus *Oligota* Mannerheim (Col., Staphylinidae) occurring in the Caribbean region and adjacent land areas. A key for identification is provided. The 5 new species are *O. haitiana*, *O. multicarinata*, *O. caribae*, *O. humboldti* and *O. barbadorum*. *Oligota guadeloupae* is proposed as a new name for *Oligota minutissima* Bernhauer.

INTRODUCTION

The generic synonymy of *Oligota* Mannerheim (1831:486) is given by Blackwelder (1952). The subgenus *Holobus* Solier (1849:335) has been treated by recent authors (Coiffait and Saiz 1967, and Seevers manuscript) as of generic rank but this elevation has not been followed here, and the reasons are given below. Individuals of *Oligota* may be differentiated from individuals of other Aleocharinae of the Caribbean region by possession of the following characters: head (including labrum) less than $\frac{1}{2}$ broader than long; antenna 10-segmented, 3 or more terminal articles forming a loose club; mesocoxae widely separated; hind coxa with a lamella over the base of the femur; tarsi 4-segmented, the basal article of the hind tarsus not as long as the 3 following articles together; length less than 1.2 mm.

The genus *Oligota* is of considerable interest because at least some of its members prey on phytophagous mites. The small size of the individuals, together with scattered descriptions of the species in 4 languages (English, German, Latin, Spanish), has made identification of the species of the Caribbean region difficult, especially to economic entomologists who might otherwise be able to provide valuable prey records. The described species of the region are here compared, and a key is given for their identification. Four species, not found in the Caribbean region proper but from neighbouring parts of Central and South America, are included.

The sculpture of the abdominal terga is a useful diagnostic character. These terga (tergum II is the first visible tergum) vary from complete absence of sculpture (pubescence only) to the presence of U- or V-shaped setiferous tubercles varying in size and prominence, and to the presence of distinct longitudinal carinae with their sides parallel or nearly so. These carinae are setiferous and probably of the same origin as the tubercles, but they are continuous with the raised anterior borders of the terga (except, occasionally, in the case of the carina immediately adjacent to the lateral edge of the tergite), which is not so with the tubercles. The number and horizontal spacing of the carinae on the tergum is usually irregular, but their presence or absence appears to be diagnostic at the

¹Present address: Entomological Research Center, P. O. Box 520, Vero Beach, FL 32960

species level. Fig. 1 to 25 were drawn with the abdomen as found and generally somewhat telescoped, particularly in dried specimens. Although the sculpture of fresh specimens may be seen fairly clearly with a powerful dissecting microscope, it was found preferable to soften dried specimens in alcohol, remove the abdomen, soften this in cold, concentrated KOH, and remove the terga before drawing their sculpture.

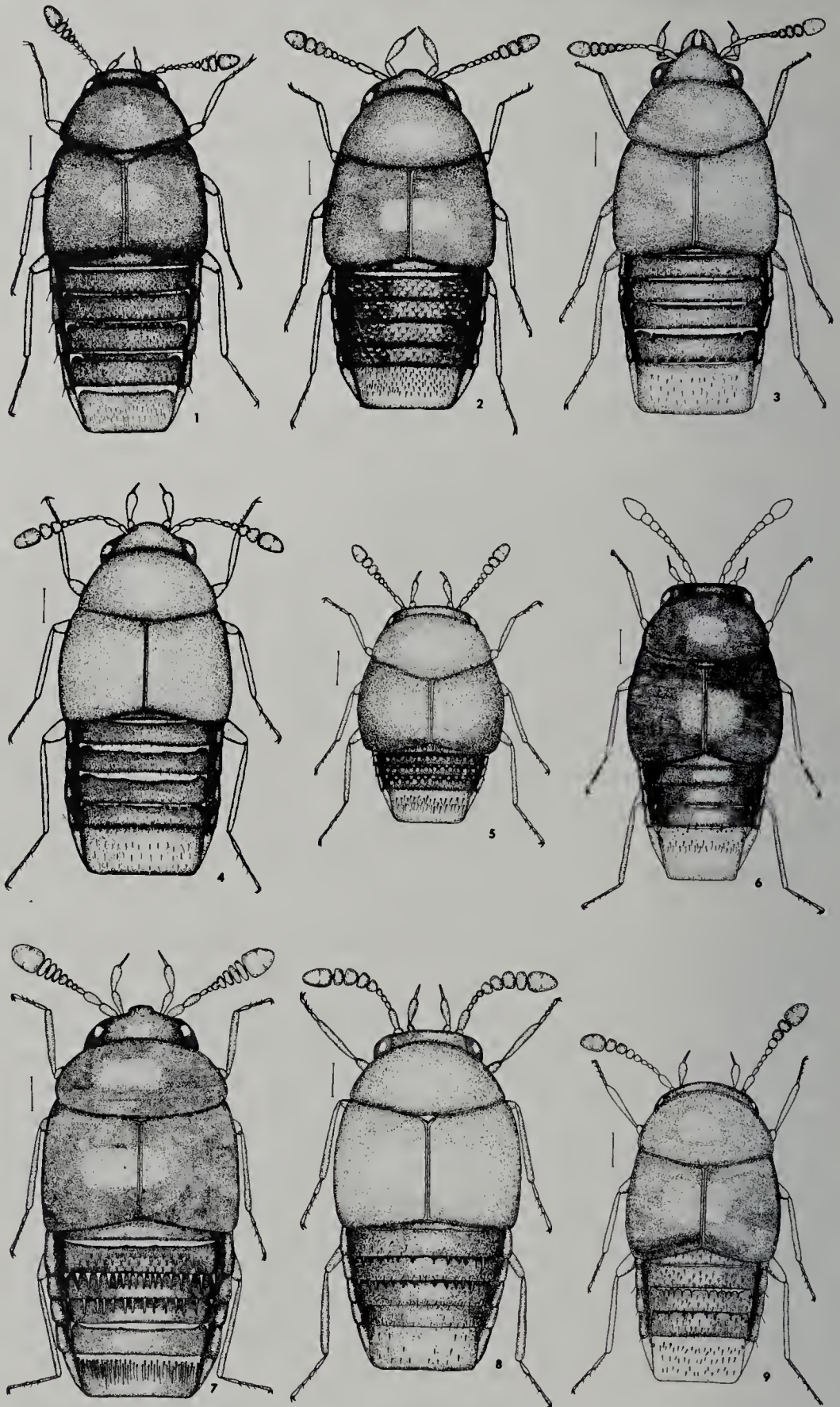


Fig. 1-9: *Oligota* spp.: 1) *O. chrysopyga* Kr.; 2) *O. cadaverina* Brg.; 3) *O. zonata* Brg.; 4) *O. haitiana* sp. nov.; 5) *O. guadeloupae* nomen novum; 6) *O. albidicornis* Bernh.; 7) *O. multicarinata* sp. nov.; 8) *O. caribae* sp. nov.; 9) *O. hypocyptina* Bernh. The scale line represents 0.1 mm.

The genitalia of male specimens may be removed at the same time for examination. Temporary mounts of terga and genitalia were made in glycerol on cavity microscope slides. Permanent mounts were made in Canada balsam (after dehydration) or polyvinyl lactophenol (without dehydration) on standard microscope slides or on small rectangles of celluloid which were pinned along with the specimen. Whole insects, mounted with water-soluble glue on card rectangles, are more easily handled and less liable to damage than specimens mounted on card points.

Because of telescoping in dried specimens, length is not a very useful measurement. It is given here (for uniformity) as the length from the eyes to the apex of abdomen. The head of a live specimen is normally

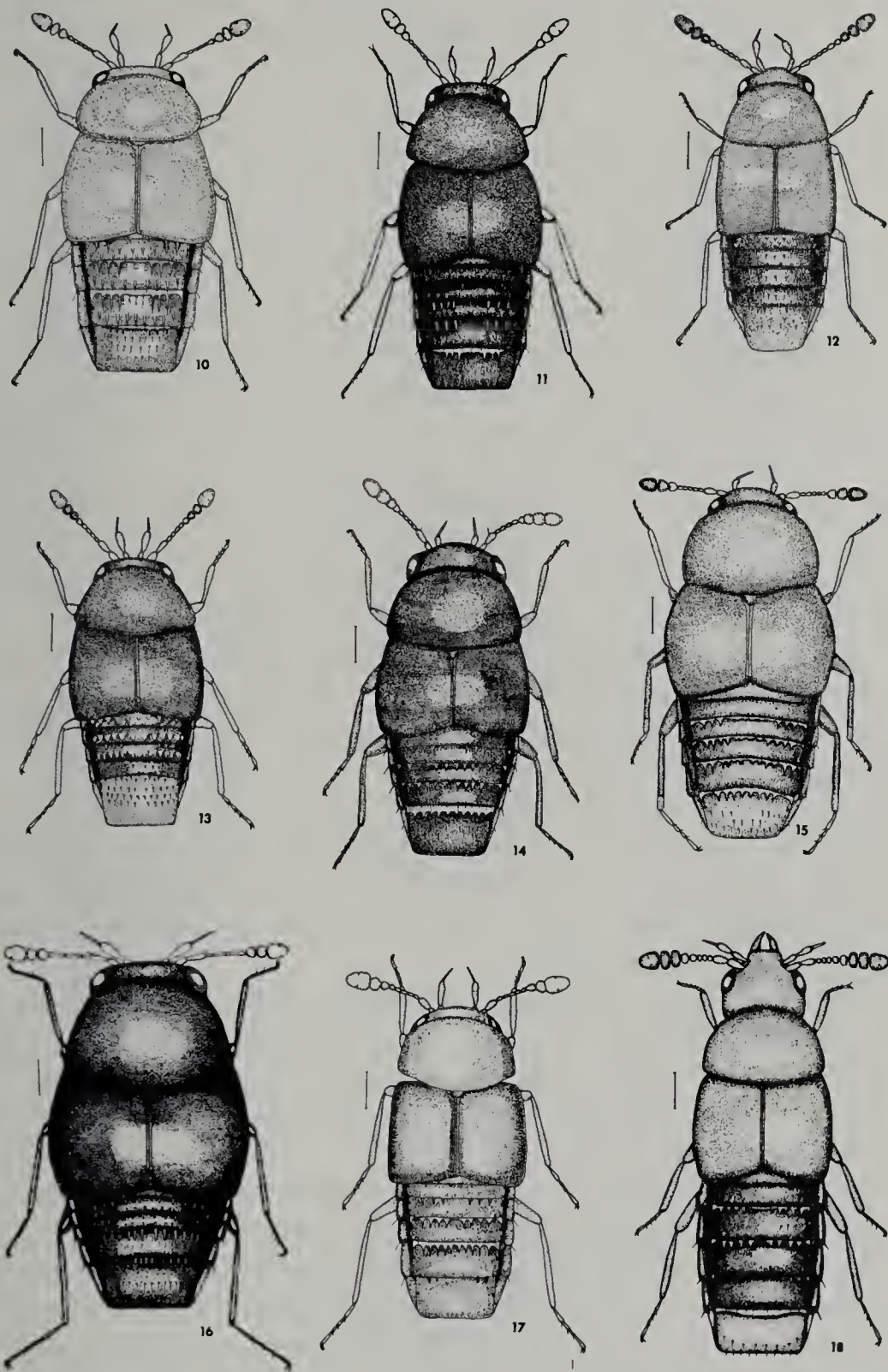


Fig. 10-17: *Oligota* spp.: 10) *O. testaceorufa* Bernh.; 11) *O. laxata* Cam.; 12) *O. humboldti* sp. nov.; 13) *O. smithi* Cam.; 14) *O. minuta* Cam.; 15) *O. barbadorum* sp. nov.; 16) *O. centralis* Sharp; 17) *O. luteicornis* Brg. The scale line represents 0.1 mm.

held in a more or less vertical position so that the mandibles are not visible from above. Characters of the maxillary palpi and antennae are readily seen, but not those of the mandibles, labium, and frons, which require dissection from the head. Width is the maximum width of the elytra.

Coiffait and Saiz (1967) separated the subgenera (which they considered genera) *Oligota* and *Holobus* on the following characters:

1. Smaller body, almost parallel-sided, labrum truncate anteriorly, prementum small and deeply divided into two lobules *Oligota*
- 1.' Larger body, strongly narrowed apically, labrum indented at anterior edge (but illustrated as bilobed), prementum with a very small entire lobe with bristles *Holobus*

For *Oligota* these characters were based on examination of *Oligota pumilio* Kiesw., *O. apiciventrìs* Fairm. & Germ. and *O. loana* Coiffait and Saiz; those of *Holobus* were based on *H. pigmaeus* Solier. In addition, the shape of the mandibles (right mandible finely denticulate in *Oligota*, not in *Holobus*) was considered to be a character separating the taxa.

I have examined specimens of *Oligota pusillima* (Gravenhorst) (*Aleochara*), the type species of *Oligota*, and found them to agree in the above characters with Coiffait's definition of that taxon, except that the labrum is very shallowly emarginate rather than truncate. *Holobus pigmaeus* is the type of *Holobus*. These characters, especially those of the labium, are not readily seen, and their examination involves some dissection of the head, almost invariably resulting in its destruction. Thus I have examined these characters in only a few species because I did not wish to risk destruction of borrowed specimens, especially when these were holotypes. Therefore I have not attempted a subgeneric separation of the species I have examined. Characters of the labium and mandibles were examined in specimens of *O. barbadorum*, in Colombian specimens of *O. centralis*, and in Jamaican specimens of *O. minuta*.

In *O. barbadorum* and *O. minuta* the prementum is similar to that of *Holobus pigmaeus* figured by Coiffait and Saiz. The labrum is much less deeply divided than that of *H. pigmaeus* or of *O. centralis*, emarginate rather than bilobed. The right mandible is not denticulate and the body is strongly narrowed posteriorly.

In *O. centralis* the prementum is similar to that of *Holobus pigmaeus* and of *O. barbadorum*, but the articulation between the first and second articles of the labial palpus was not visible in the specimens examined. The labrum is bilobed and the right mandible is not denticulate. The body is narrowed posteriorly.

O. barbadorum, *O. minuta*, and *O. centralis* would thus be placed in *Holobus*, but there is some variation in diagnostic characters. Until an adequate number of specimens of the remaining species is available for dissection, the range of variation of these characters will not be known. I have arranged the species in the following pages according to similarities and expect that the division between the subgenera *Oligota* and *Holobus* occurs in the vicinity of *O. rhopalocera*.

The 3 remaining subgenera (*Deroligota* Sharp (1908:555), *Gnatholigota* Sharp (1908:556), and *Nesoligota* Sharp (1908:557)), do not appear to be

represented in the Caribbean area. I have examined specimens (in the case of *Nesoligota* the holotype) of the type species of each of these taxa. The key below does not differ much from that given by Sharp (1908).

KEY TO SUBGENERA OF *Oligota*

1. Mandibles falciform, each with a single tooth at about half the length from the base; gular sutures almost parallel..... *Gnatholigota*
 1'. Mandibles short and stout, gular sutures strongly divergent basally 2

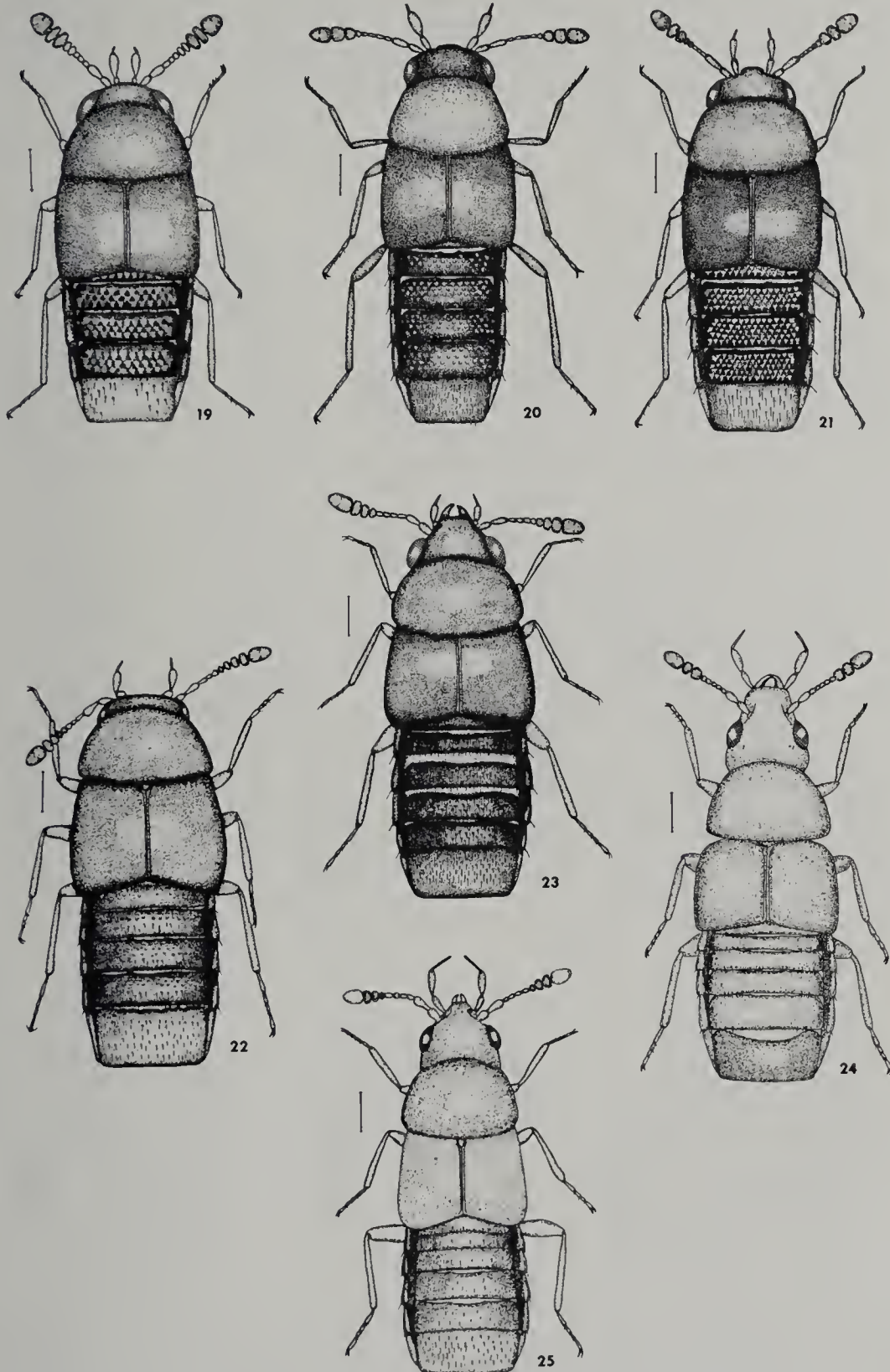


Fig. 18-25: *Oligota* spp.: 18) *O. rhopalocera* Bernh.; 19) *O. tricolor* Brg.; 20) *O. schmidti* Brg.; 21) *O. horni* Brg.; 22) *O. parva* Kr.; 23) *O. pseudoparva* S. A. Williams; 24) *O. rufa* Cam.; 25) *O. maculicornis* Cam. The scale line represents 0.1 mm.

- 2(1). Length greater than 1.1 mm; abdomen not broadest at base 3
 2'. Smaller, if longer than 1.0 mm, then abdomen narrowed from
 base to apex 4
 3(2). Body broad; elytra longer than pronotum *Nesoligota*
 3'. Body slender; elytra shorter than pronotum; prementum with 2
 small lobules *Deroligota*
 4(2'). Smaller, almost parallel-sided; labrum truncate or slightly
 and broadly emarginate anteriorly; prementum with 2
 tiny lobules *Oligota*
 4'. Larger, strongly narrowed posteriorly, labrum bilobed or deeply
 divided; prementum without 2 tiny lobules *Holobus*

Collections are abbreviated as follows: British Museum, Natural History (BMNH); Field Museum of Natural History (FMNH); Institute of Jamaica (IJ); J. H. Frank (JHF); S. A. Williams (SAW); University of the West Indies, St. Augustine, Trinidad (UWIT).

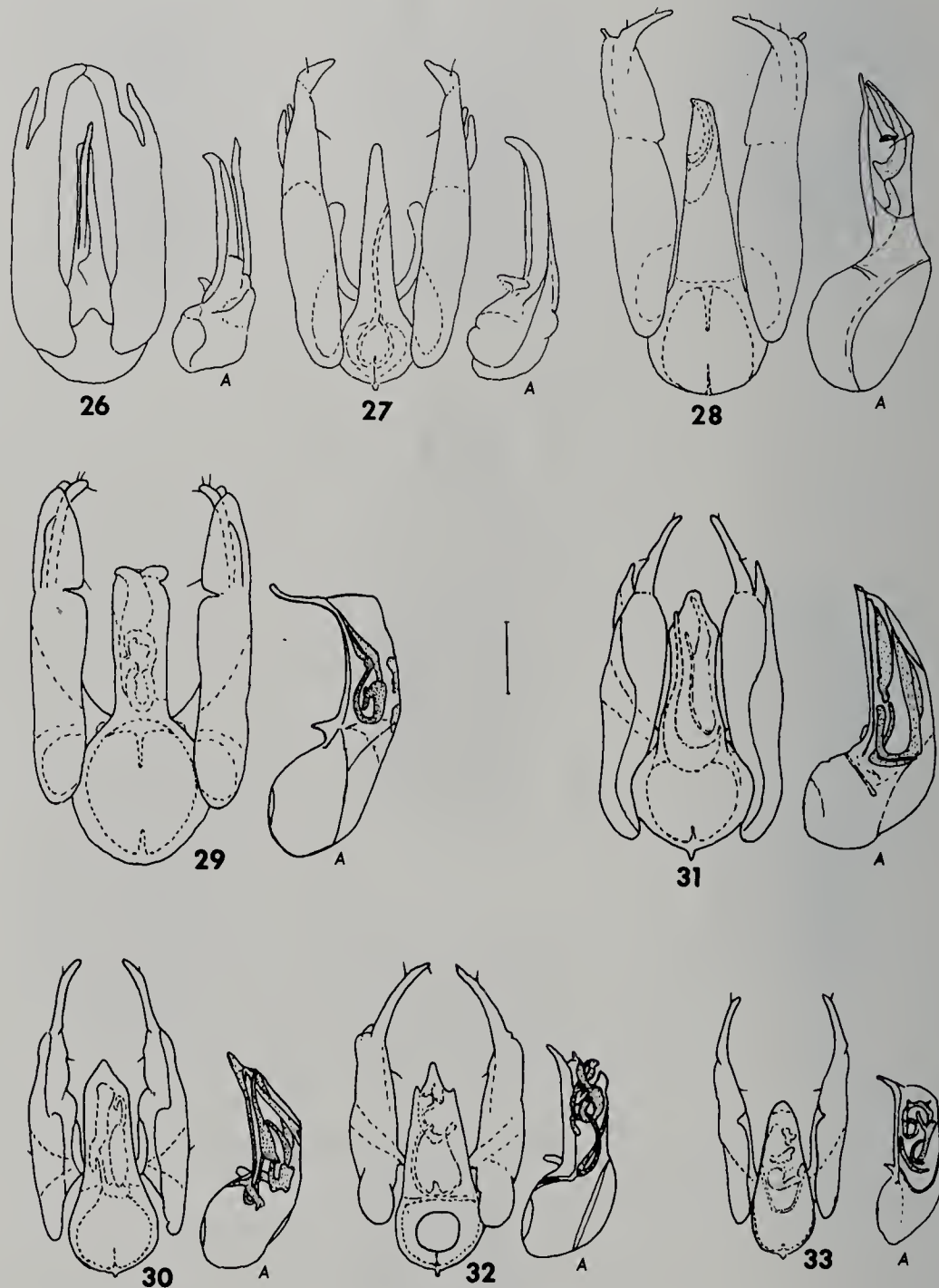


Fig. 26-33: *Oligota* male genitalia: 26,26a) *O. chrysopyga* Kr.; 27,27a) *O. cadaverina* Brg.; 28,28a) *O. zonata* Brg.; 29,29a) *O. haitiana* sp. nov.; 30,30a) *O. albidicornis* Bernh.; 31,31a) *O. multicarinata* sp. nov.; 32,32a) *O. hypocyptina* Bernh.; 33,33a) *O. testaceorufa* Bernh. The scale line represents 0.1 mm.

DESCRIPTION OF SPECIES

Oligota chrysopyga Kraatz, 1859:45

(Fig. 1,26,26A,45)

Oligota ventralis Fauvel, 1889:271

Length 1.10 mm, width 0.50 mm. Large, convex, ovate, moderately closely punctate and pubescent. Head, elytra, and terga II-VI fulvo-piceous; pronotum fulvous; tergum VII and legs flavescent; articles I-VII of antenna and last article of maxillary palpus flavous, remaining articles fulvous. Articles VII-X of the (short) antenna forming a club; article VII intermediate in width between VI and VIII. Last article of maxillary palpus 1/2 length of penultimate. Elytra longer than pronotum. Terga without longitudinal carinae. Aedeagus slender, curved apically; lateral parameres exceeding length of aedeagus by 1/3. *Type locality*: Ceylon. *Specimens examined*: GRENADA: 'Windward Side' (?St. Andrew Parish),

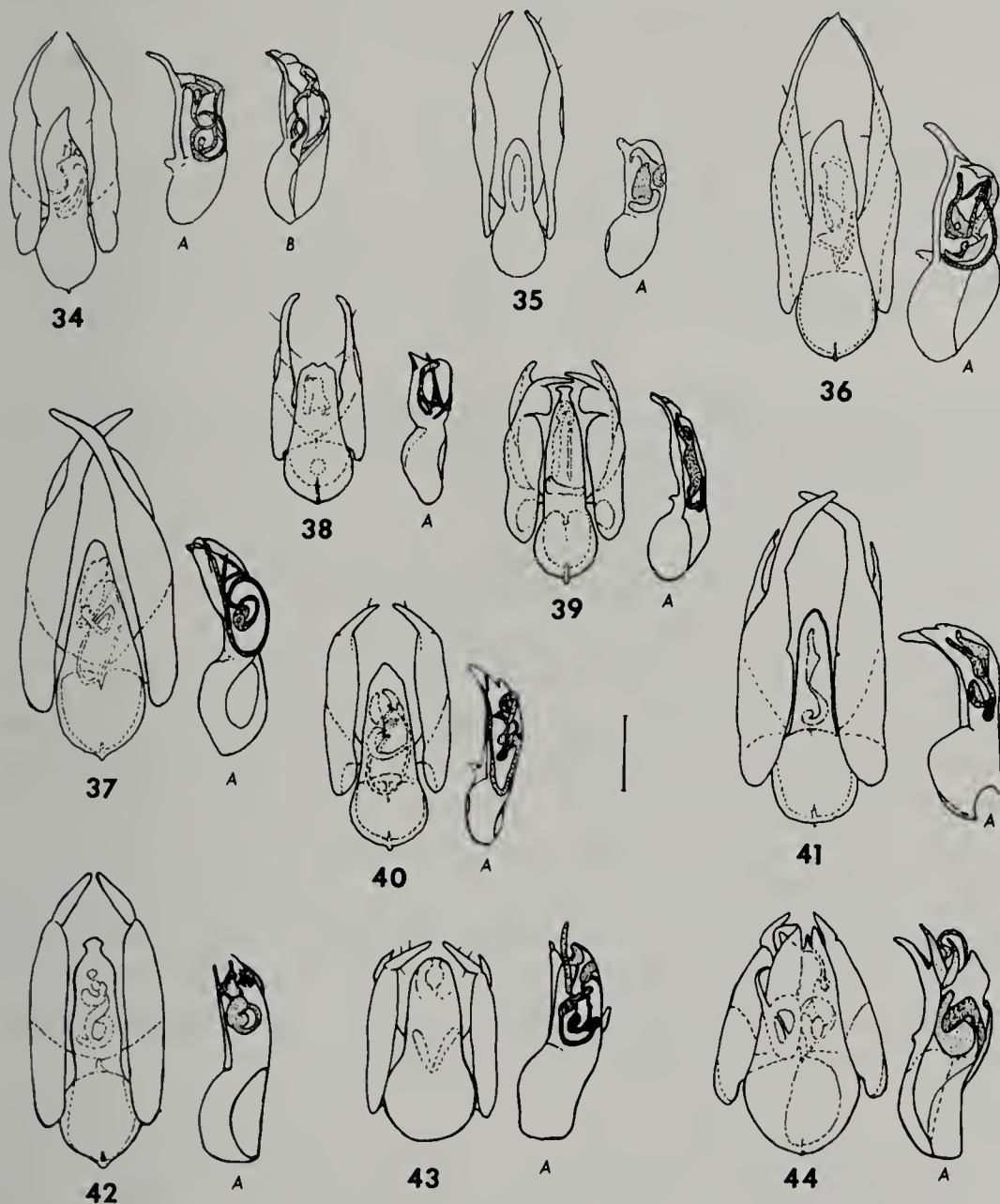


Fig. 34-44: *Oligota* male genitalia: 34,34a,b) *O. minuta* Cam.; 35, 35a) *O. barbadorum* sp. nov.; 36,36a) *O. centralis* Sharp; 37,37a) *O. luteicornis* Brg.; 38,38a) *O. rhopalocera* Bernh.; 39,39a) *O. schmidti* Brg.; 40,40a) *O. horni* Brg.; 41,41a) *O. parva* Kr.; 42,42a) *O. pseudoparva* Williams; 43,43a) *O. rufa* Cam.; 44,44a) *O. maculicornis* Cam. Note: the view of the aedeagus in Fig. 34a is lateral, in Fig. 34b dorso-lateral and everted. The scale line represents 0.1 mm.

Balthazar, H. H. Smith (1: BMNH); JAMAICA: St. Elizabeth Parish, Galleon Beach, 13-II-72, J. H. Frank, in pile of rotting seaweed (1 ♂: JHF); Westmorland Parish, Negril, 21-III-72, J. H. Frank u.v. light trap in breadfruit grove (1:JHF). CANARY ISLANDS: Tenerife, Puerto de la Cruz, 21-23-I-67, T. Palm (1 male: SAW). *Other records*: Africa and Orient (Blackwelder, 1943).

Oligota cadaverina Bierig, 1934:113

(Fig. 2,27,27A,46)

Length 1.10 mm, width 0.50 mm. Large, convex, ovate, moderately closely punctate and pubescent. Head, pronotum, and elytra ferruginous; terga II-VI piceous, VII rufous; legs, palpi and antennae rufous with antennal articles VII-X slightly ferruginous. Antenna longer than that of *O. chrysopyga*, gradually clubbed. Last article of maxillary palpus 0.5 length of penultimate. Elytra longer than pronotum. Terga without longitudinal carinae, but with small tubercles. Aedeagus slender, curved apically, similar to that of *O. chrysopyga*; lateral parameres exceeding length of aedeagus by 1/3.

Type locality: CUBA: Havana Province, Mariel. *Specimens examined*: CUBA: Havana Province, Mariel, 2-II-30, (lectotype), Playa Marianas, 10-IV-32, (4), Sierra Bonilla, Cueva del Indio, Tapaste, 5-II-35 (1), Havana, 13-V-37 (1) (all FMNH); VIRGIN ISLANDS: Tortola, M. Cameron (4 : BMNH).

Remarks: Bierig (1934) stated that the species is very common in leaf litter; many individuals were found under the very decomposed corpse of a dog along with *O. parva*.

O. zonata Bierig, 1934:115

(Fig. 3,28,28A,47)

Length 1.05 mm, width 0.50 mm. Large, convex, not so much narrowed posteriorly as the 2 preceding species. Elytra with denser punctation than pronotum, pubescence sparse. Head, pronotum, elytra, legs, and palpi ferruginous; terga II-VI picescent; articles VI-IX of antenna infuscate; tergum VII, articles I-V and X of antenna rufous. Antenna gradually clubbed. Last article of maxillary palpus ½ length of penultimate. Elytra longer than pronotum. Terga without longitudinal carinae. Aedeagus broader than that of *O. chrysopyga* and *O. zonata*, sinuate at the apex; lateral parameres exceeding it in length by 0.25.

Type locality: CUBA: Havana Province, Sierra Bonilla, *Specimens examined*: CUBA: Havana Province, Sierra Bonilla, 15-V-32 (lectotype), III-35 (3), Aspiro-Rangel, 30-III-34 (1), II-36 (1) (all FMNH); JAMAICA: St. Andrew Parish, Upper Mountain View, 3-XI-46, G. B. Thompson, from decayed sweetsop (*Annona squamosa* L.) (1 : IJ). *Other records*: CUBA: Pinar del Rio Province, Portugués, VIII-29; Havana Province, Aspiro, III-34 (Bierig, 1934).

Remarks: Bierig (1934) stated that all 3 specimens seen by him at that time had been collected under wet bark of fallen trees.

O. haitiana Frank, NEW SPECIES

(Fig. 4,29,29A,48)

Length 1.05 mm, width 0.50 mm. Body rounded but abdomen not strongly narrowed posteriorly (as *O. zonata*). Moderately densely punctate and pubescent; not very shining. Head, pronotum, elytra, tergum VII and last article of antenna rufous; legs, palpi and articles I-V of antenna flavo-rufous; articles VI-IX of antenna slightly infusate; terga II-VI piceo-rufous, but sometimes only V-VI piceo-rufous and remainder rufous. Antennal club formed of articles VII-X, though VII much narrower than VIII so that club is not abrupt; articles VIII and IX not very transverse. Last article of maxillary palpus 0.4 length of penultimate. Elytra much longer than pronotum. Terga without longitudinal carinae. Aedeagus broad, apex very much curved and elongate; lateral parameres exceeding it in length by $\frac{1}{4}$.

Type locality: HAITI. *Specimens examined*: HAITI: M. Cameron (holotype and 7 paratypes: BMNH).

Oligota guadeloupeae Frank, NOMEN NOVUM

(Fig. 5,49)

Oligota minutissima Bernhauer, 1923:144 (not Stephens, 1832:146 and 431; not Heer, 1839:334).

Length 0.70 mm, width 0.45 mm. Small, very broad, rounded, strongly narrowed apically. Body shining, sparsely punctate and pubescent. Head and pronotum castaneous, terga II-VI and elytra (especially apically) infusate; legs, palpi, antennae and tergum VII flavescent. Antennae gradually clubbed, apical articles not especially transverse. Last article of maxillary palpus $\frac{1}{2}$ length of penultimate and slightly curved. Elytra not much longer than pronotum. Terga without longitudinal carinae, but with faintly-delineated large, flat, V-shaped tubercles. Male unknown.

Type locality: GUADELOUPE. *Specimens examined*: GUADELOUPE: Plason (2 syntype females mounted on same card, the foremost of them is here designated the lectotype: FMNH).

Remarks: *Oligota guadeloupeae* is proposed here as a new name for *Oligota minutissima* Bernhauer, 1923, which name is a junior homonym of *Oligota minutissima* Stephens, 1832.

Oligota albidicornis Bernhauer, 1923:143

(Fig. 6,30,30A,50)

Length 0.95 mm, width 0.45 mm. Sides not strongly rounded; strongly narrowed apically. Body shining, sparsely punctate and pubescent. Head, pronotum, elytra and terga II-VI dark, shining piceo-ferruginous; tergum VII rufous; legs flavescent, antennae and palpi very pale flavous. Antennae very gradually clubbed without any transverse articles. Last article of maxillary palpus 0.6 length of penultimate. Elytra much longer than pronotum. Terga without longitudinal carinae. Aedeagus quite broad, lateral parameres exceeding it in length by $\frac{1}{2}$; somewhat resembling *O.*

multicarinata and *O. centralis*.

Type locality: GUADELOUPE. *Specimens examined*: GUADELOUPE: Plason (holotype and paratype male: FMNH).

Oligota multicarinata Frank, NEW SPECIES

(Fig. 7,31,31A,51)

Length 1.15 mm, width 0.60 mm. The largest *Oligota* of the region; broad, not much ovate. Moderately closely punctate and pubescent. Head, pronotum, elytra and abdomen entirely piceo-ferruginous; antennae, palpi and legs ferruginous. Articles VI-IX of antenna increasingly transverse; article IX very strongly transverse, more than 3 times as broad as long; article V quadrate. Last article of maxillary palpus $\frac{5}{8}$ length of penultimate. Elytra longer than pronotum which is very transverse. Terga IV and V with strong longitudinal carinae; tergum III with 3 rows of elongate tubercles but without carinae; terga VI and VII without carinae, though VII with numerous strong setae. Aedeagus broad, the lateral parameres exceeding it in length by almost $\frac{1}{3}$.

Type locality: CUBA: Pinar del Rio Province, Sierra del Rosario. *Specimens examined*: CUBA: Pinar del Rio Province, Sierra del Rosario, V-37 (holotype and paratype), Havana Province, Aspiro, 28-XII-33 (1), El Rangel, XI-25 (1), 29-XII-33 (1), 4-XII-38 (1) (all FMNH).

Remarks: all specimens are from the Bierig collection and have a label name as above.

Oligota caribae Frank, NEW SPECIES

(Fig. 8,52)

Length 1.10 mm, width 0.55 mm. Large, broad, convex. Moderately closely punctate and pubescent. Head, pronotum, elytra, legs, palpi, articles I-V and X of antenna and tergum VII ferruginous; articles VI-IX of antenna and terga II-VI slightly infuscate. Articles VI-X of antenna forming a gradual club. Last article of maxillary palpus greater than $\frac{1}{2}$ length of penultimate. Elytra much longer than pronotum. Terga IV and V with longitudinal carinae; terga III, VI and VII without carinae. Male unknown.

Type locality: CUBA: Havana Province, Sierra Rangel. *Specimens examined*: CUBA: Havana Province, Sierra Rangel, XII-35 (holotype), 14-I-34 (1), 18-I-34 (1), 28-I-34 (1), XII-34 (1), Aspiro, XII-37 (1) (all FMNH).

Remarks: all specimens are from the Bierig collection and have a label name as above.

Oligota hypocyptina Bernhauer, 1923:143

(Fig. 9,32,32A,53)

Length 0.95 mm, width 0.45 mm. Not strongly rounded. Body moderately punctate and pubescent. Head, pronotum, elytra, terga II-VI and basal $\frac{1}{2}$ of tergum VII piceo-ferruginous; apex of tergum VII, legs, palpi and antennal articles I-VI rufous; antennal articles VII-X ferruginous. Antennae gradually clubbed, apical articles not strongly transverse. Last

article of maxillary palpus 0.6 length of penultimate. Elytra longer than pronotum. Terga V and VI with longitudinal carinae, IV and VII without. Aedeagus stout, slightly curved at tip; parameres exceeding it in length by $\frac{1}{2}$; rather similar to that of *O. albidicornis*.

Type locality: GUADELOUPE. *Specimens examined*: GUADELOUPE: Plason (2 syntypes mounted on same card: FMNH).

Oligota testaceorufa Bernhauer, 1923:144

(Fig. 10,33,33A,54)

Length 0.90 mm, width 0.40 mm. Not much rounded. Shining, sparsely punctate and pubescent. Head, pronotum, elytra, legs, palpi and antennae pale castaneous; terga infusate. Antenna with distinct club of articles VIII-X. Last article of maxillary palpus barely $\frac{1}{2}$ length of penultimate. Elytra longer than pronotum. Terga IV-VII with longitudinal carinae. Aedeagus moderate in width and length, curved at tip, with some similarity to that of *O. hypocyptina*; parameres exceeding it in length by $\frac{2}{3}$.

Type locality: VIRGIN ISLANDS: St. Thomas. *Specimens examined*: VIRGIN ISLANDS: St. Thomas, L. v. Eggers, ('cotype' : FMNH).

Oligota laxata Cameron, 1922:124

(Fig. 11,55)

Length 0.85 mm, width 0.40 mm. Body scarcely rounded, shining, sparsely punctate. Head, pronotum, and abdomen rufo-piceous, elytra slightly darker; legs, palpi and antennae flavate. Articles VIII-X of antenna forming a distinct club. Last article of maxillary palpus $\frac{1}{2}$ length of penultimate. Elytra distinctly longer than pronotum., Terga V-VII with longitudinal carinae; IV without. Male unknown.

Type locality: GRENADA: 'Windward Side' (? St. Andrew Parish), Balthazar, H. H. Smith (holotype female); 'Leeward Side', St. George Parish, St. George's, H. H. Smith (1 female) (both BMNH).

Remarks: a specimen in the Cameron collection (BMNH) from Kingston, Jamaica, labelled '*O. laxata*' prompted Blackwelder (1943) to record the species as occurring also in Jamaica. I believe that the Jamaican specimen belongs to *O. minuta* q. v.

Oligota humboldti Frank, NEW SPECIES

(Fig. 12,56)

Length 0.75 mm, width 0.35 mm. Small, body scarcely rounded. Body moderately punctate and pubescent. Head, pronotum, elytra, tergum VII, legs, antennal articles I-VII and palpi rufous; terga II-VI rufo-piceous; antennal articles VIII-X slightly darker than the other articles and forming a club. Last article of maxillary palpus 0.6 length of penultimate. Elytra markedly longer than pronotum. Terga IV-VII with longitudinal carinae; tergum III with a pattern of small tubercles. Male unknown.

Type locality: CUBA: Las Villas Province, Trinidad, El Cubanito. *Specimens examined*: CUBA: Las Villas Province, Trinidad, El Cubanito, XII-35 (holotype female : FMNH).

Remarks: the specimen is from the Bierig collection and has a label name as above.

Oligota smithi Cameron, 1922:124

(Fig. 13,57)

Length 0.80 mm, width 0.35 mm. Small, body slightly rounded, more so than *O. humboldti*; more narrowed apically than *O. humboldti*. Body shining, sparsely punctate and pubescent. Head, pronotum, elytra, and terga II-VI rufo-piceous; legs, palpi, and antennae flavous; tergum VII rufous. Antennae short, articles VIII-X forming a club; the club more abrupt than that of *O. humboldti*; apical articles scarcely transverse. Last article of maxillary palpus $\frac{2}{3}$ length of penultimate article. Elytra markedly longer than pronotum. Terga IV-VII with longitudinal carinae. Male unknown.

Type locality: GRENADA: St. George Parish, Woburn. *Specimens examined:* GRENADA: 'South End', St. George Parish, Woburn, H. H. Smith (holotype female: BMNH).

Oligota minuta Cameron, 1931:82

(Fig. 14,34,34A,34B,58)

Length 0.80 mm, width 0.40 mm. Shorter, broader, more rounded and more closely punctate and pubescent than *O. laxata*. Head, pronotum, elytra, and terga II-VII fulvo-piceous; middle and hind legs flavescent; fore legs, antennae, and palpi flavous; pubescence pale. Antennal articles VIII-X forming a club as in *O. smithi*; none of the articles is truly transverse. Last article of maxillary palpus $\frac{5}{6}$ length of penultimate. Elytra from scutellum shorter than pronotum. Terga IV-VII with longitudinal carinae. Aedeagus rather slender, more so than that of *O. testaceorufa*, curved at apex, asymmetrical, parameres similar to those of *O. testaceorufa*.

Type locality: TRINIDAD: St. George County, Huevos. *Specimens examined:* TRINIDAD: St. George County, Huevos, F. W. Urich, predaceous on mites on cassava (*Manihot esculenta* Crantz) (3 syntypes: BMNH); ANTIGUA: IX-61, F. D. Bennett, predaceous on tetranychid mites, (1 female: UWIT); JAMAICA: Kingston, Hope River, M. Cameron, sweeping, (1 female: BMNH), Kingston, X-60, F. D. Bennett, predaceous on mites, (3 females: UWIT), Trelawny Parish, Hampden Estate, VII-59, F. D. Bennett, predator of *Oligonychus pratensis* (Banks) (Tetranychidae) on sugar cane (*Saccharum officinarum* L.), (1 female: UWIT), St. Catherine Parish, Spanish Town, Jamaica School of Agriculture, 9-VII-71, F. D. Bennett, with *Tetranychus tumidus* Banks (Tetranychidae) on soybean (*Glycine max* Merr.), (11: JHF); CUBA: Havana Province, Havana, 21-VI-29, (1 female), 2-VII-29, (1 female), 5-VII-29, (1 female); Santiago de las Vegas, 25-V-36, A. R. Otero, on *Cedrela* infested with mites, (2 females) (all FMNH). *Other records:* Bierig (1934) records the habitat (under *O. centralis*) as the underside of bean leaves growing up railings of gardens in Calles 8 and 21, Havana-Vedada, Cuba.

Remarks: I have not seen the specimen from the Cameron collection, labelled as *O. minuta* and collected in Grenada, mentioned by Blackwelder

(1943). The Cameron specimen from Jamaica was labelled as *O. laxata*, and this record is given by Blackwelder (1943). The specimens from Cuba are all from the Bierig collection and were recorded by Bierig (1934) as *O. centralis*; this record is also noted by Blackwelder (1943). The Bennett specimens from Antigua and from Kingston, Jamaica had been tentatively identified by R. D. Pope as *O. minuta*. I am not able to differentiate on external morphology any of the specimens from Antigua, Jamaica, or Cuba, from *O. minuta*; nor (on genitalic structure) the 2 males from Spanish Town, Jamaica from the male syntype from Trinidad.

Oligota barbadorum Frank, NEW SPECIES

(Fig. 15,35,35A,59)

Length 1.0 mm, width 0.45 mm. Not as broad as *O. centralis*, strongly narrowed posteriorly. Body shining, sparsely punctate, and pubescent. Head, pronotum, elytra and terga II-VI castaneous; tergum VII paler; middle and hind legs castaneous with tarsus and apical $\frac{1}{4}$ of tibia paler; anterior legs, palpi and articles I-IX of antenna flavescent; article X darkly infusate. Antenna with distinct club of articles VIII-X. Last article of maxillary palpus as long as penultimate. Elytra not much longer than pronotum. Terga IV-VII with longitudinal carinae. Aedeagus small, curved at tip, somewhat similar to that of *O. testaceorufa*; lateral parameres slender, exceeding aedeagus by its own length.

Type locality: BARBADOS: Christchurch Parish, Windsor. *Specimens examined*: BARBADOS, Christchurch Parish, Windsor, 27-I-70, M. M. Alam, predaceous on tetranychid mites on sweet potato (*Ipomea batatas* Lam.), (holotype and 6 paratypes); St. James Parish, 4-III-70, M. M. Alam, feeding on tingids on cassava (*Manihot esculenta*) (6); Graeme Hall, 19-II-70, M. M. Alam, on beans (*Phaseolus* sp.) infested with tetranychid mites (5) (all JHF).

Oligota centralis Sharp, 1883:293

(Fig. 16,36,36A,60)

Length 1.0 mm, width 0.55 mm. Very broad, ovate, posteriorly narrowed. Shining, sparsely punctate, and pubescent. Head, pronotum, elytra, and abdomen entirely nigro-piceous, with outstanding setae of the same colour; legs flavous but very darkly infusate; antennae and palpi flavous. Antenna with a club of articles VIII-X. Last article of maxillary palpus 0.9 length of penultimate. Terga IV-VII with strong, longitudinal carinae. Aedeagus rather similar to that of *O. albidicornis*, but curved at tip, asymmetrical, and lateral parameres more slender.

Type locality: GUATEMALA: Guatemala City. *Specimens examined*: GUATEMALA: Guatemala City, G. C. Champion (holotype female: BMNH); COLOMBIA: (? Guajira Province), San Antonio, 26-VIII-70, I. Zenner de Polania, predator of mites (*Tetranychus cinnebarinus* (Boisd.)) on rose leaf (*Rosa* sp.) (7: JHF). *Other records*: see remarks under *O. minuta*.

Remarks: this is the only species examined in which the body has no trace of reddish colouration.

Oligota luteicornis Bierig, 1934:119

(Fig. 17,37,37A,61)

Length 0.95 mm, width 0.40 mm. Body parallel-sided, not much narrowed apically. Sparsely punctate and pubescent. Head and pronotum rufo-ferruginous; elytra and abdomen unicolorous ferruginous; antennae, palpi, and legs flavescent. Antenna with articles VIII-X forming a distinct club. Last article of maxillary palpus 0.7 length of penultimate. Elytra much longer than pronotum. Terga IV-VII with longitudinal carinae. Aedeagus conical, apex curved, parameres exceeding it in length by 2/3.

Type locality: CUBA: Havana Province, Mariel. *Specimens examined:* CUBA: Havana Province, Mariel, 17-I-32, (lectotype); Aspiro-Rangel, 6-V-34, (1); Havana, 13-V-37 (1), 27-I-38 (1); Sierra de Candela, Güines, 11-XII-38, A. Bierig, (2); Pinar del Rio Province, Sierra del Rosario, V-37, (1) (all FMNH). *Other records:* CUBA: Havana Province, Cruz de Piedra, II-32; La Lisa, I-34; Aspiro, III-34; (? Camaguey Province), Caimito del Guayabal, V-33 (Bierig, 1934).

Remarks: all specimens are from the Bierig collection. Bierig (1934) stated that the species was found by sifting fallen leaves, principally bamboo.

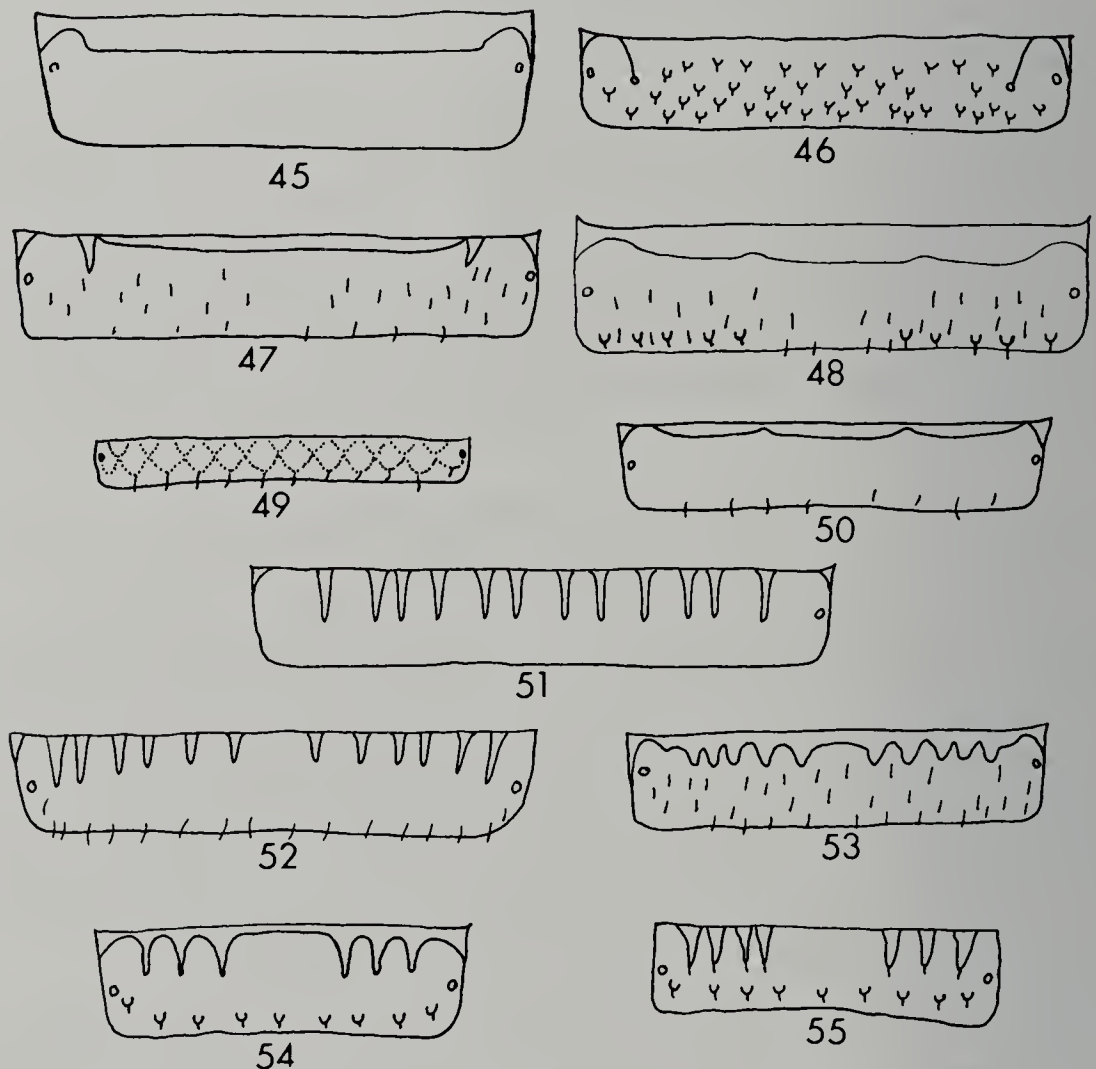


Fig. 45-55: *Oligota* spp., microsculpture on 5th abdominal terga (sometimes partly obscured by 4th): 45) *O. chrysopyga* Kr.; 46) *O. cadaverina* Brg.; 47) *O. zonata* Brg.; 48) *O. haitiana* sp. nov.; 49) *O. guadeloupae* nomen novum; 50) *O. albidicornis* Bernh.; 51) *O. multicarinata* sp. nov.; 52) *O. caribae* sp. nov.; 53) *O. hypocyptina* Bernh.; 54) *O. testaceorufa* Bernh.; 55) *O. laxata* Cam.

Oligota rhopalocera Bernhauer, 1923:145

(Fig. 18,38,38A,62)

Length 1.05 mm, width 0.40 mm. Parallel-sided, not much narrowed posteriorly, sparsely punctate. Head, pronotum, elytra, legs, and articles I-VII of antenna rufous; tergum VII and maxillary palpi flavescent; terga II-VI and articles VIII-X of antenna ferruginous; darker in colour than *O. testaceorufa*. Articles VII-X of antenna forming a club, though article VII, whilst sharply broader than article VI, is distinctly narrower than article VIII; articles VIII and IX transverse; article VI quadrate; article VII slightly transverse. Last article of maxillary palpus 0.9 length of penultimate. Elytra much longer than pronotum. Terga IV-VI with longitudinal carinae, VII without. Aedeagus very short and broad, curved at the apex; parameres slender and exceeding it in length by $\frac{1}{2}$.

Type locality: VIRGIN ISLANDS, St. Thomas. *Specimens examined*: VIRGIN ISLANDS, St. Thomas, L. v. Eggers ('cotype' and 1 male); CUBA: Havana Province, Sierra Bonilla, III-35 (2); Cueva del Indio, Tapaste, 5-II-33 (1); Sierra Rangel, 32 (1), XII-35 (1); Sierra de Candela, Güines, 2-XII-38, A. Bierig (1) (all FMNH); Jamaica: St. Andrew Parish, Clydesdale, 9-III-72, J. H. Frank, under bark of conifer log, (1 female: JHF). *Other records*: CUBA: Havana Province, Sierra Bonilla, Cueva del Indio, 29, Cruz de Piedra, 32 (Bierig, 1934).

Remarks: all the Cuban specimens are from the Bierig collection. Bierig (1934) stated that the species had been found on various occasions, always on sifting fallen leaves in damp sites.

Oligota tricolor Bierig, 1934:116

(Fig. 19,63)

Length 0.90 mm, width 0.35 mm. Body parallel-sided. Punctuation and pubescence sparse. Head, pronotum, elytra, and articles VIII-X of antenna fusco-ferruginous; terga II-VI rufo-piceous; tergum VII, articles I-VII of antenna, legs, and palpi bright rufous. Articles VIII-X of antenna form an abrupt club; articles VIII and IX more transverse than in *O. horni*. Last article of maxillary palpus only $\frac{1}{3}$ length of penultimate. Eyes large and protruding. Elytra not much longer than pronotum. Terga II-VI without carinae, but with large V-shaped tubercles. Male unknown.

Type locality: CUBA: Havana Province, Guanabo. *Specimens examined*: CUBA: Havana Province, Guanabo, II-31 (holotype female: FMNH).

Remarks: Bierig (1934) stated that the holotype was collected during twilight, in a car.

Oligota schmidtii Bierig, 1934:116

(Fig. 20,39,39A,64)

Length 0.95 mm, width 0.35 mm. Parallel-sided. Like *O. parva* in appearance, but smaller and more slender. Finely punctate and pubescent. Head, elytra, terga II-VI and antennal articles VIII-X fusco-ferruginous; pronotum, legs and tergum VII ferruginous; palpi and articles I-VII of antenna rufous. Antennal articles VIII-X forming a club; article VIII

obconical; article IX slightly transverse. Last article of maxillary palpus 0.35 length of penultimate. Elytra distinctly longer than pronotum. Terga without longitudinal carinae but III-VI with a tuberculate sculpture similar to that of *O. parva*. Aedeagus slender; apex with a transverse process; parameres exceeding it by only 1/7 of its length.

Type locality: COSTA RICA: San José Province, San José, La Caja. *Specimens examined*: COSTA RICA: San José Province, San José, La Caja, 31, H. Schmidt, (holotype); 39, H. Schmidt (1); 41, H. Schmidt (2); 43, H. Schmidt (2); Heredia Province, Vara Blanca (1) (all FMNH).

Oligota horni Bierig, 1934:117

(Fig. 21,40,40A)

Length 0.90 mm, width 0.35 mm. Body parallel-sided, less rounded than *O. tricolor*, more so than *O. schmidti*; hardly narrowed apically. Head, pronotum, and articles VI-IX of antennae ferruginous; elytra, terga II-VI, and article X of antenna infuscate; tergum VII, legs, palpi, and articles I-V of antenna rufescent. Antennal club of articles VIII-X fairly abrupt. Last article of maxillary palpus 0.5 length of penultimate. Elytra much longer than pronotum. Terga without longitudinal carinae, though terga III-VI with a pattern of small tubercles. Aedeagus broad, apical third curved; lateral parameres exceeding it in length by 2/5.

Type locality: COSTA RICA: San José Province, San José, La Caja. *Specimens examined*: COSTA RICA: San José, La Caja, 31, H. Schmidt (paratype male); VI-43, H. Schmidt (1); 43, H. Schmidt (1) (all FMNH).

Oligota parva Kraatz, 1862:300

(Fig. 22,41,41A,65)

Oligota pygmaea Kraatz, 1858:352 (not *Holobus pigmaeus* Solier, 1849:336); *Oligota parva* Kraatz, 1862:300; *Oligota contempta* Wollaston, 1867:231; *Oligota aliena* Mulsant and Rey, 1873:134; *Oligota californica* Casey, 1911:230; *Oligota congruens* Casey, 1911:230; *Oligota esmeraldae* Casey, 1911:231.

Length 1.0 mm, width 0.40 mm. Body parallel-sided, not much narrowed apically. Moderately closely punctate and pubescent. Head, pronotum, elytra, and articles VI-X of antenna ferruginous; terga II-VI infuscate; tergum VII, legs, antennal articles I-V, and palpi flavescent. Articles VII-X of antenna forming a club which is not sharply defined. Last article of maxillary palpus 0.5 length of penultimate. Elytra much longer than pronotum. Terga without longitudinal carinae but with a pattern of small tubercles. Aedeagus moderately broad, curved in a broad arc, parameres exceeding it in length by 0.6.

Type locality: FRANCE: Rouen (Horion, 1967). *Specimens examined*: MEXICO: State of Veracruz, Cordoba, A. Fenyes (1); VIRGIN ISLANDS: Tortola, M. Cameron (1) (both: BMNH); JAMAICA: St. Thomas Parish, Golden Grove, 9-10-IX-69, J. H. Frank, u.v. light trap (1: JHF); St. Catherine Parish, Worthy Park, 13-V-69, R. E. Woodruff, u.v. light trap (1: JHF); *Other records*: CUBA: Havana Province, under the very decomposed corpse of a dog (Bierig, 1934); JAMAICA; ST. VINCENT; GRENADA (Cameron collection: Blackwelder, 1943); MEXICO; ARGENTINA; U. S. A.; EUROPE; ORIENT (Blackwelder, 1943; Horion, 1967 etc.).

Oligota pseudoparva S. A. Williams, 1972

(Fig. 23,42,42A,66)

Length 0.95 mm, width 0.50 mm. Shape similar to that of *O. parva*. Body finely but moderately closely punctate and pubescent. Head, pronotum, elytra, and articles VII-X of antenna ferruginous, slightly flavescent; legs, palpi, and articles I-VI of antenna flavescent; terga II-VI piceo-ferruginous; tergum VII coloured as elytra. Antenna with club of articles VII-X, not sharply defined; articles VIII and IX strongly transverse. Last article of maxillary palpus 0.75 length of penultimate. Elytra scarcely longer than pronotum. Terga without longitudinal carinae but with a pattern of tubercles; the tubercles similar to, but smaller than those of *O. parva* and *O. schmidti*. Aedeagus moderately broad, with a transverse process at the apex like that of *O. schmidti*; lateral parameres exceeding it in length by scarcely 1/3.

Type locality: ENGLAND: Port of Liverpool. *Specimens examined*: ENGLAND: Liverpool, IV-31 (1); 25-X-58 (1) from Brazil nut detritus (both SAW).

Remarks: the species is believed to originate from Brazil (Williams, 1972) and is included here because of its resemblance to *O. parva* and the possible risk of confusion if it should occur in the Caribbean region.

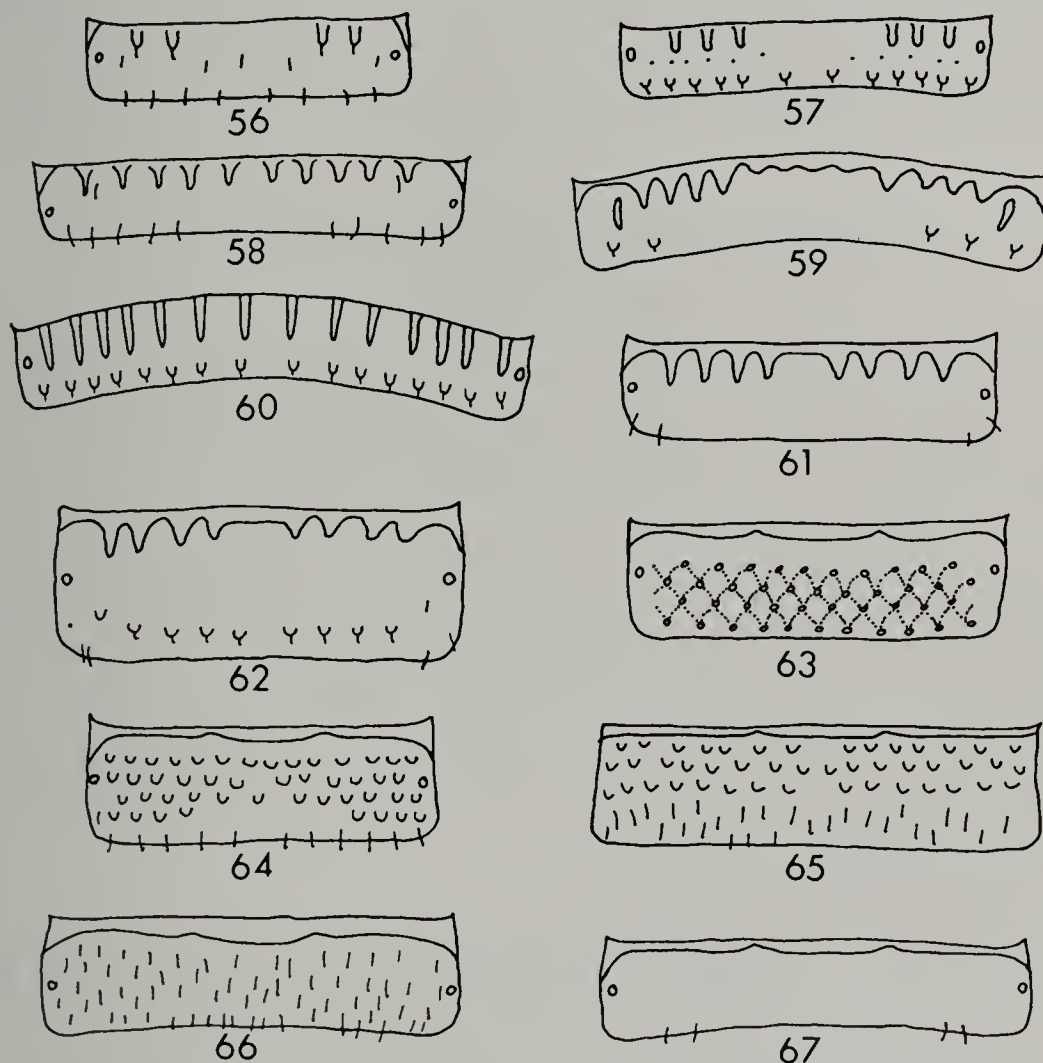


Fig. 56-67: *Oligota* spp., microsculpture on 5th abdominal terga (sometimes partly obscured by 4th): 56) *O. humboldti* sp nov.; 57) *O. smithi* Cam.; 58) *O. minuta* Cam.; 59) *O. barbadorum* sp. nov.; 60) *O. centralis* Sharp; 61) *O. luteicornis* Brg.; 62) *O. rhopalocera* Bernh.; 63) *O. tricolor* Brg.; 64) *O. schmidti* Brg.; 65) *O. parva* Kr.; 66) *O. pseudoparva* Williams; 67) *O. rufa* Cam.

Oligota rufa Cameron, 1922:125

(Fig. 24,43,43A,67)

Length 1.0 mm, width 0.30 mm. Body parallel-sided, slender. Sparsely punctate and pubescent. Head, pronotum, elytra, abdomen, legs and palpi, and articles I-II of antenna rufous; articles III-X of antenna infusate; tergum VII slightly infusate. Antenna with distinct club of articles VIII-X; article VII quadrate but distinctly smaller; articles III-VI elongate. Last article of maxillary palpus 0.85 length of penultimate. Elytra from scutellum shorter than pronotum. Terga without longitudinal carinae. Aedeagus broad with short lateral parameres, barely exceeding it in length.

Type locality: JAMAICA; St. Andrew Parish, Constant Spring. *Specimens examined*: JAMAICA; St. Andrew Parish, Constant Spring, M. Cameron, under bark (holotype male: BMNH).

Remarks: Cameron (1922) described the holotype as from St. Lucia. However, the holotype bears the following labels: JAMAICA Dr. Cameron/Constant Spring under bark./ Type H. T./M. Cameron Bequest. B. M. 1955-147/Standing in B. M. coll. as *O. rufa* Cam. (St. Lucia). Because this is the only specimen in the Cameron collection, its identity as the holotype can hardly be disputed. Since Constant Spring is a well-known locality in St. Andrew Parish, Jamaica, the placement of the specimen in a collection of insects from St. Lucia may have been made accidentally by Cameron, perhaps in comparing it with some other insect. Thus the type locality given by Cameron must be corrected and the St. Lucia record deleted.

Oligota maculicornis Cameron, 1922:124

(Fig. 25,44,44A)

Length 0.90 mm, width 0.30 mm. Body parallel-sided, similar to *O. rufa* but slightly shorter. Quite closely punctate and pubescent. Head, pronotum, and terga II-VI rufous; elytra and tergum VII flavescent; legs and articles I-VI of antenna flavescent; article X of antenna and last article of maxillary palpus flavous; articles VII-IX of antenna and remaining articles of maxillary palpus infusate. Antenna with distinct club of articles VIII-X; article VII quadrate but distinctly smaller; articles III-VI elongate. Last article of maxillary palpus 0.85 length of penultimate. Elytra from scutellum shorter than pronotum. Terga without longitudinal carinae. Aedeagus broad with short lateral parameres, barely exceeding it in length.

Type locality: HAITI: Port-au-Prince.

Specimens examined: HAITI: Port-au-Prince, M. Cameron, dead tree (holotype male: BMNH; ? paratype: FMNH); CUBA: Pinar del Rio Province, Sierra del Rosario, El Sabicu, IX-36 (2); Havana Province, Pico Somorro, 7-XII-29, A. Bierig (2); Aspiro, 1-3-VIII-41, M. Barro (1 male and 2 females); Sierra de Anafe, III-30, P. Bermudez (1) (all FMNH).

Remarks: this species is very closely related to the preceding and is separated on distribution of pubescence, colour, and the form and size of the aedeagus (Fig. 45-46A). The precise relationship to other *Oligota* is not readily apparent and will demand examination of mandibles,

labrum, and labium. Bierig (1934) recorded the presence of *O. maculicornis* in Cuba and stated that it is found in fungi and rotten logs. I agree with Bierig's determination of the Cuban specimens.

KEY TO SPECIES OF *OLIGOTA*
FROM THE CARIBBEAN REGION

- | | |
|--|----------------------|
| 1. Body broad, ovate | 2 |
| 1'. Body parallel-sided | 18 |
| 2(1). Tergites unsculptured or with scaly pattern of setiferous tubercles | 3 |
| 2'. Tergites with several distinct longitudinal carinae | 8 |
| 3(2). Penultimate article of antenna transverse | 4 |
| 3'. Penultimate article of antenna slightly elongate | <i>albidicornis</i> |
| 4(3). Length 1.0 mm or more | 5 |
| 4'. Length 0.7 mm | <i>guadeloupa</i> |
| 5(4). Raised anterior border of terga V and VI entire and without diagonal line | 6 |
| 5'. Raised anterior border of terga V and VI broken by raised diagonal line | 7 |
| 6(5). Raised anterior border of terga straight; abdomen more narrowed apically; apex of aedeagus slightly curved | <i>chrysopyga</i> |
| 6'. Raised anterior borders of terga bi-indentate about centre; abdomen less narrowed apically; apex of aedeagus greatly produced and curved | <i>haitiana</i> |
| 7(5'). Terga III-VI with setiferous tubercles | <i>cadaverina</i> |
| 7'. Terga III-VI without setiferous tubercles but with setae | <i>zonata</i> |
| 8(2'). Tergum VI without longitudinal carinae | 9 |
| 8'. Tergum VI with longitudinal carinae | 10 |
| 9(8). Penultimate article of antenna more than thrice as broad as long | <i>multicarinata</i> |
| 9'. Penultimate article of antenna less than twice as broad as long | <i>caribae</i> |
| 10(8'). Tergum VII without longitudinal carinae | <i>hypocypina</i> |
| 10'. Tergum VII with longitudinal carinae | 11 |
| 11(10'). Tergum IV without longitudinal carinae | <i>laxata</i> |
| 11'. Terga IV-VII with longitudinal carinae | 12 |
| 12(11'). Head, pronotum, elytra, and abdomen entirely nigropiceous, without any trace of reddish colouration | <i>centralis</i> |

12'. Head, pronotum, elytra, and abdomen not nigro-piceous	13
13(12') Last article of antenna distinctly darker than penultimate <i>barbadorum</i>	
13'. Last article of antenna not darker than penultimate	14
14(13') Head, pronotum, and elytra rufous, rufo-ferruginous, or pale castaneous	15
14'. Head, pronotum, and elytra rufo-piceous or fulvo-piceous	17
15(14') Club of antenna darker than basal articles; tergum VII rufous with basal terga dark; length 0.75 mm.	<i>humboldti</i>
15'. Antenna unicolorous; abdomen unicolorous; length 0.90-0.95 mm.	16
16. Body parallel-sided; last article of maxillary palpus 0.7 length of penultimate	<i>luteicornis</i>
16'. Body more narrowed apically; last article of maxillary palpus barely $\frac{1}{2}$ length of penultimate	<i>testaceorufa</i>
17(14') Elytra from scutellum longer than pronotum; tergum VII bright rufous	<i>smithi</i>
17'. Elytra from scutellum shorter than pronotum; abdomen uni- colorous	<i>minuta</i>
18(1') Terga with longitudinal carinae	19
18'. Terga without longitudinal carinae	20
19(18). Terga IV-VI only with longitudinal carinae	<i>rhopalocera</i>
19' Terga V-VI only, V-VII only, or IV-VII with longitudinal carinae	couplet 10, 10'
20(18'). Elytra from scutellum shorter than pronotum; head, tho- rax, elytra, and abdomen rufous to flavo-rufous	25
20'. Elytra from scutellum longer than pronotum; head, thorax, and elytra ferruginous or darker, basal abdominal seg- ments darker	21
21(20'). Last article of maxillary palpus about $\frac{1}{3}$ length of penulti- mate	22
21'. Last article of maxillary palpus at least $\frac{1}{2}$ length of penulti- mate	22
22(21). Penultimate article of antenna $2\frac{1}{2}$ times as broad as long	<i>tricolor</i>
22'. Penultimate article of antenna scarcely broader than long	<i>schmidti</i>
23(21'). Lateral edges of elytra sub-parallel	<i>horni</i>
23'. Lateral edges of elytra strongly curved, elytra broadest in apical $\frac{1}{2}$	24

- 24(23'). Last article of maxillary palpus $\frac{1}{2}$ length of penultimate *parva*
- 24.' Last article of maxillary palpus $\frac{3}{4}$ length of penultimate *pseudoparva*
- 25(20) Entire body very sparsely punctate and pubescent; tergum VII darker than basal terga *rufa*
- 25'. Much more densely punctate and pubescent; tergum VII paler than basal terga *maculicornis*

DISCUSSION

Distribution of species among the Caribbean islands is as follows: Cuba (11), Jamaica (5), Haiti (2), Virgin Islands (4), Antigua (1), Guadeloupe (3), Barbados (1), St. Vincent (1), Grenada (4), Trinidad (1). This probably reflects the activities of collectors, particularly of Bierig in Cuba.

DEPOSITION OF SPECIMENS

The holotype and a paratype of *O. barbadorum* have been deposited in the British Museum (Natural History) [BMNH] with paratypes to the Field Museum [FMNH] and specimens to S. A. Williams [SAW]. Colombian specimens of *O. centralis* have been given to BMNH, FMNH, and SAW and Jamaican specimens of *O. minuta* have been given to BMNH, FMNH, SAW, and the Institute of Jamaica.

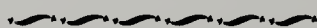
ACKNOWLEDGEMENTS

I am deeply indebted to Rupert Wenzel of the Field Museum of Natural History and to Joy Farradane and Peter M. Hammond of the British Museum (Natural History) for the loan of many specimens. Specimens of *O. pseudoparva*, *O. pusillima*, and *O. chrysopyga* were kindly provided by S. A. Williams with whom I also had useful correspondence. F. D. Bennett, T. H. Farr, and R. E. Woodruff kindly provided specimens. G. E. Ball, D. R. Whitehead, and J. M. Campbell obliged by reading and criticising the manuscript.

REFERENCES

- BERNHAEUER, M. 1923. Coleopterologische Beiträge. Ent. Tidskr. 44: 141-146.
- BIERIG, A. 1934. Novedades de los géneros *Oligota*, *Mann.* y *Euvira*, Sharp de la fauna neotropical. Mem. Soc. Cubana Hist. Nat. 8: 113-123.
- BLACKWELDER, R. E. 1943. Monograph of the West Indian beetles of the family Staphylinidae. U. S. Nat'l. Mus. Bull. 182: viii+658 p.
- BLACKWELDER, R. E. 1952. The generic names of the beetle family Staphylinidae. U. S. Nat'l. Mus. Bull. 200: iv+483 p.
- CAMERON, M. 1922. Descriptions of new species of Staphylinidae from the West Indies, pt. II. Ann. Mag. Nat. Hist. (Series 9) 9:113-128, 633-652.
- CAMERON, M. 1931. Description of a new species of *Oligota* (Col., Staphylinidae) from Trinidad. Ann. Mag. Nat. Hist. (Series 10) 8:82.
- CASEY, T. L. 1911. Memoirs on the Coleoptera, II. Lancaster, Pa. 259 p.

- COIFFAIT, H and F. SAIZ. 1967. Aleocharidae du Chili. I. - Tribus Oligotini, Myllaenini, Bolitocharini (Col., Staphylinidae). Bull. Soc. Hist. Nat. Toulouse 103:51-98.
- FAUVEL, A. 1889. Les coléoptères de la Nouvelle - Calédonie et dépendances avec descriptions, notes et synonymies nouvelles (suite) staphylinides. Rev. d' Ent. 8:242-271, 277-285.
- HEER, O. 1839. Fauna Coleopterorum Helvetica, pt. I, fasc. 2, Zurich. p. 145-360.
- HORION, A. 1967. Faunistik der mitteleuropäischen Käfer. Vol. XI, Staphylinidae pt. 3, Überlingen. xxiv+419 p.
- KRAATZ, G. 1858. Ueber *Oligota apicata* Er. u. Verwandte. Berliner Ent. Zeitschr. 2:350-352.
- KRAATZ, G. 1859. Die Staphyliniden—Fauna von Ostindien, insbesondere der Insel Ceylan. Berlin. 196 p.
- KRAATZ, G. 1862. (Synonymische Bemerkungen). Ueber Coleopteren. Berliner Ent. Zeitschr. 6:298-300.
- MANNERHEIM, C. G. VON. 1831. Precis d' un nouvel arrangement de la famille des brachélytres de l'ordre des insectes coléoptères. Mem. Acad. Sci. St. Petersbourg 1:415-501.
- MULSANT, E. and REY, C. 1873. Histoire naturelle des coléoptères de France: Brévipennes (Aléochariens). Paris. 155 p.
- SEEVERS, C. H. (unpublished manuscript). A generic and tribal revision of the North American Aleocharinae (Coleoptera: Staphylinidae).
- SHARP, D. 1883. Biologia Centrali-Americana: Insecta, Coleoptera, 1(2): 145-312. London.
- SHARP, D. 1908. Coleoptera, IV. Fauna Hawaiiensis. 3(5):367-579. Cambridge.
- SOLIER, A. J. J. 1849. In Gay, Historia física y política de Chile. Zoologia. Vol. IV. Paris. 510 p.
- STEPHENS, J. F. 1832. Illustrations of British Entomology . . . 5, Mandibulata. London. 448 p.
- WILLIAMS, S. A. 1972. A Brazilian species of *Oligota* (Col., Staphylinidae) new to science and imported into Britain. Ent. Mon. Mag. 108:38-39.
- WOLLASTON, T. V. 1867. Coleoptera Hesperidum, being an enumeration of the coleopterous insects of the Cape Verde Archipelago (With appendix to the Coleoptera Atlantium). London. 285 p.



BOOK REVIEW

Washington State Place Names by James W. Phillips. 1971. University of Washington Press, Seattle, WA 98105. xv+167 p.; \$6.95, cloth.

Entomologists are searching constantly for aids in locating obscure localities on specimen labels. It is unfortunate that few thorough gazeteers are available. This book, although not a gazeteer, will be of great help in tracing the history of various localities and their names in Washington State. It is unfortunate that the author did not include the elevation or the exact location in the form of longitude and latitude. It includes 1500 place names, including major population centers, mountains, rivers, and geographical features. Produced by the same University Press that published Hatch's "Beetles of the Pacific Northwest", it should be useful to anyone dealing with the fauna of that area.—R. E. Woodruff.